(57) Claim

1.   A gaming machine **having** a video display screen, a computer controller for controlling screen displays thereon and game play, input control means which are user operable to initiate game play at a cost to the player and to interact with the game, and a software programme controlling said computer controller, said software being operable during game play to place the machine in a mode following a win which will pay for that win and also provide for a number of subsequent games to be played free to the player, and operable if one of the number of subsequent games played results in a win to increase the winning payout for that win outcome by double.

AUSTRALIA

PATENTS ACT 1990

632454

COMPLETE SPECIFICATION FOR A PETTY PATENT

O R I G I N A L

NAME OF APPLICANT: OLYMPIC AMUSEMENTS PTY LTD

ACTUAL INVENTOR:

TITLE OF INVENTION: IMPROVEMENTS IN VIDEO GAMING MACHINES

ADDRESS FOR SERVICE:
GRIFFITH HACK & CO.
509 ST KILDA ROAD
MELBOURNE VIC 3004
AUSTRALIA

The following statement is a full description of this invention, including the best method of performing it known to me:-

AUSTRALIA

The Patents Act 1990

PATENT REQUEST: PETTY PATENT

We, being the person identified below as the Applicant, request the grant of a patent to the person identified below as the Nominated Person, for an invention described in the accompanying petty complete specification.

Applicant: OLYMPIC AMUSEMENTS PTY LTD

Address: 1562-1568 CENTRE ROAD
SPRINGVALE VIC 3171

Nominated Person: OLYMPIC AMUSEMENTS PTY LTD

Address: 1562-1568 CENTRE ROAD
SPRINGVALE VIC 3171

**Title of
Invention:**   IMPROVEMENTS IN VIDEO GAMING MACHINES

Name of Actual Inventors:

ADDRESS FOR SERVICE:
GRIFFITH HACK & CO.
509 ST KILDA ROAD
MELBOURNE VIC 3004

ATTORNEY CODE: GH or HA

GRIFFITH HACK & CO.

_____
(Signed, for and on behalf
of the Applicant)

<u>19 June 1992</u>
(Date)

632454

AUSTRALIA
Patents Act 1990

NOTICE OF ENTITLEMENT

We OLYMPIC AMUSEMENTS PTY LTD
A.C.N. 005 903 006

of 1562-1568 CENTRE ROAD
SPRINGVALE VIC 3171
AUSTRALIA

being the applicant(s) in respect of an application for a patent for an invention entitled
IMPROVEMENTS IN VIDEO GAMING MACHINES (Application No. 18428/92), state
the following:
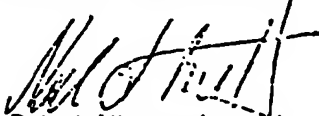
1. The nominated person(s) have, for the following reasons, gained entitlement from
    the actual inventor(s):

    The actual inventor Nicholas Balaginnis of Olympic Amusements Pty Ltd, 1562-
    1568 Centre Road, Springvale, Vic. 3171 Australia, made the invention whilst
    employed by the nominated person, and the nominated person is thereby
    entitled.

2. The nominated person(s) are the applicants of the basic application listed on the
    patent request form.

DATED this 9th day of October 1992

GRIFFITH HACK & CO.

Patent Attorney for and
on behalf of the applicant(s)

IMPROVEMENTS IN VIDEO GAMING MACHINES

Field of the Invention

5   This invention relates to improvements in video gaming
machines and particularly to a ~~method of controlling the~~
~~operation of a~~ gaming machine so that it is appealing to
players yet still retains control over the percentage
payout of monies invested.

10   Description of the Prior Art

Video gaming (or poker) machines have considerable
popularity throughout all States of Australia, with quite
substantial amounts of money wagered on these machines.
There is a growing tendency for State governments to

15   legalise the use of gaming machines by licensing operators,
with concomitant revenue gains through taxation of monies
invested. The licensed operation of gaming machines is the
subject of State legislation and regulation. This
regulation most always dictates a maximum percentage payout

20   for a gaming machine. For example, a maximum of 87% of
monies invested must be returned as winnings, and
manufacturers of gaming machines therefore must design
their machines around these regulatory controls.

25   Because of the burgeoning nature of the gaming machine
market there is intense competition between manufacturers
to supply the various existing and new venues. When it
comes to selecting a supplier of gaming machines, the
operator of venues will often pay close attention to which

30   particular games are the most popular with their patrons.
Therefore, it is in the interest of gaming machine
manufacturers to devise games which are popular with
players, and in that way improve their chances at obtaining

further sales.

Many various strategies have been tried in the past to make
the games more enticing to players, including the commonly
5   known double-up feature, whereby, if a player wins a
particular game, they can then risk the winnings of that game
in a double-or-nothing mode in which they gamble on a
subsequent, and often different, game such as whether a red
or black card will be the next card drawn.

10   Other techniques adopted in the past have been to provide
complexity in the numbering and combinations of indicia which
would result in a win, thereby hoping to convince the player
that there is a greater chance of winning and to keep their
interest in a particular game.

15   Object and Statement of the Invention
It is an object of the present invention to attempt to
provide an improved gaming machine.

Therefore, the invention provides a gaming machine having a
20   video display screen, a computer controller for controlling
screen displays thereon and game play, input control means
which are user operable to initiate game play at a cost to
the player and to interact with the game, and a software
programme controlling said computer controller, said software
25   being operable during game play to place the machine in a
mode following a win which will pay for that win and also
provide for a number of subsequent games to be played free to
the player, and operable if one of the number of subsequent
games played results in a win to increase the winning payout
30   for that win outcome by double.

awarding a number of free subsequent games to the
player; and

if on any one of the ~~said~~ subsequent games resulting in
a winning outcome, awarding double the usual winnings for
5   ~~that winning outcome.~~

Description of a Preferred Embodiment
In order that the invention may be more clearly
ascertained, an embodiment will now be described.

10   The methodology of the embodiment will be described, and it
is to be understood that it is within the capabilities of
the non-inventive worker in the art to introduce the
methodology on any standard microprocessor-based gaming
machine by means of appropriate programming.

15   The embodiment will be described with reference to the card
game of draw poker as will be implemented on a video gaming
machine. It is to be understood that the methodology could
be applied to a number of other games that might be played
on a video gaming machine.

20   A first version of the embodiment relates to playing the
game of 52 card draw poker. The probability of achieving a
winning hand in a "two draw" hand of draw poker and the
prize units allocated for each win is given in Table 1. By
"second draw" it is meant that a player receives a first
25   draw of five cards and can retain a number of those cards
that are favourable then to have the discarded cards
redrawn as the second draw. Table 2 indicates the assumed
strategy adopted by a player after a first draw.

30   From Table 1, it can be determined that the expected return
is obtained by multiplying the entries in the second and

third columns and adding the results. In the present case, the return (R) = 80.27%.

In order to enhance enjoyment for the player the draw poker
5   game has a special feature, whereby if the result of a player of a hand is a full house then a second mode of operation is entered, in which the player receives four free subsequent games. If the player wins on any one of the four subsequent plays then double the normal prize is
10   awarded.

The expected return of the gaming machine with the special feature is given by the formula R x (1 + 8 x 0.0111) = 87.39%. In the case of legislation in place in New South
15   Wales and Victoria, the minimum payout required of gaming machines is 87% hence that statutory requirement can be met, whilst still providing increased enjoyment for players of the game.

20   A second version of the embodiment relates to the game of draw poker but played with 53 cards. That is, one card, which is typically the joker, is a "wild card". The game is played in the same way with the joker serving to substitute for any other card in a winning combination.
25   Table 3 shows the probability of any particular winning hand and the prize awarded based on a two draw regime in accordance with the strategy relating to the first draw as shown in Table 4. That is, on the first draw, it is assumed the player will follow the strategy of Table 4, and
30   on the basis of this the probabilities of winning a prize in a two draw hand have been determined.

As before, the expected return if the special feature was not in place is determined by multiplying the entries in

the second and third columns of Table 3 and adding the columns. Therefore, the return (R) = 78.21%. However, with the special feature relating to the four free games paying double winnings, the expected return is given by R x

5    $(1 + 8 \times 0.0144) = 87.22\%$.

Thus it can be seen that the present invention proves over a known game providing an additional layer enhancing feature which would result in economic benefit to the

10   manufacturer of the gaming machine as it would become popular with players, whilst still satisfying the statutory requirement as to the percentage return of monies invested.

Table 1

Hand	Prize	Probability
Royal Straight Flush	500	0.104×10^{-4}
Straight Flush	100	0.924×10^{-4}
Four of a kind	33	0.231×10^{-2}
Full House	10	0.111×10^{-1}
Flush	5	0.135×10^{-1}
Straight	4	0.200×10^{-1}
Three of a kind	3	0.705×10^{-1}
Two pairs	2	0.121

Table 2: First Draw Poker Strategy in Order of Precedence

Hand	Action
Royal Straight Flush	Retain all 5 cards
Straight Flush	Retain all 5 cards
Four of a kind	Retain all 5 cards
Full House	Retain all 5 cards
Flush	Retain all 5 cards
Straight	Retain all 5 cards
Three of a kind	Retain the 3, discard other 2
Two pairs	Retain the 2 pairs, discard other 1
Four to Royal Straight Flush	Retain the 4, discard other 1
Four to Straight Flush	Retain the 4, discard other 1
Any pair	Retain the pair, discard other 3
Four to Straight	Retain the 4, discard other 1
Four to Flush	Retain the 4, discard other 1
Three to Royal Straight Flush	Retain the 3, discard other 2
Three to Straight Flush	Retain the 3, discard other 2
Three to Straight	Retain the 3, discard other 2
Three to Flush	Retain the 3, discard other 2
Any other hand	Discard all 5 cards

Table 3

Hand	Prize	Probability
Royal Straight Flush	500	$1.084 \times 10^{(-4)}$
Five of a kind	100	$0.962 \times 10^{(-4)}$
Straight Flush	50	$0.535 \times 10^{(-3)}$
Four of a kind	15	$0.842 \times 10^{(-2)}$
Full House	5	0.0144
Flush	4	0.0164
Straight	3	0.0202
Three of a kind	2	0.130
Two pairs	1	0.107

Table 4: First Draw Strategy in Order of Procedure

Hand	Action
Royal Straight Flush	Retain all 5 cards
Four to Royal Straight Flush plus Joker	Retain all 5 cards
Straight Flush	Retain all 5 cards
Four to straight Flush plus Joker	Retain all 5 cards
Four of a kind plus Joker (=Five of a kind)	Retain all 5 cards
Full House	Retain all 5 cards
Flush	Retain all 5 cards
Four to Flush plus Joker	Retain all 5 cards
Straight	Retain all 5 cards
Four to Straight plus Joker	Retain all 5 cards
Two pairs plus Joker (=Full House)	Retain all 5 cards
Four of a kind	Retain the 4, discard other 1
Three of a kind plus Joker (=Four of a kind)	Retain the 4, discard other 1
Four to Royal Straight Flush	Retain the 4, discard other 1
Four to Straight Flush	Retain the 4, discard other 1
Two pairs	Retain the 4, discard other 1
Any pair (excluding Joker)	Retain pair, discard other 3
Four to Flush	Retain the 4, discard other 1
Four to Straight	Retain the 4, discard other 1
Three to Royal Straight Flush plus Joker	Retain the 4, discard other 1
Three to Straight Flush plus Joker	Retain the 4, discard other 1
Any pair plus Joker (=Three of a kind)	Retain the 3, discard other 2
Three to Straight plus Joker	Retain the 4, discard other 1
Three to Flush plus Joker	Retain the 4, discard other 1
Three to Royal Straight Flush	Retain the 3, discard other 2
Three to Straight Flush	
Three to Straight	
Three to Flush	
Three of a kind	
One Joker (but not any of the above)	Retain Joker, discard other 4
Any other hand	Discard all 5

The above hands are presumed to contain no Jokers unless explicitly stated.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1.   A gaming machine having a video display screen, a
computer controller for controlling screen displays thereon
and game play, input control means which are user operable to
initiate game play at a cost to the player and to interact
with the game, and a software programme controlling said
computer controller, said software being operable during game
play to place the machine in a mode following a win which
will pay for that win and also provide for a number of
subsequent games to be played free to the player, and
operable if one of the number of subsequent games played
results in a win to increase the winning payout for that win
outcome by double.

2.   A gaming machine as claimed in claim 1, wherein the
software is configured so the game is poker and the said
particular one of the winning outcomes is a full house.

3.   A gaming machine as claimed in either of claim 1 or
claim 2, wherein the software is configured so the number of
subsequent games is four in number.

DATED THIS 4TH DAY OF NOVEMBER 1992
OLYMPIC AMUSEMENTS PTY LTD
By Its Patent Attorneys:
GRIFFITH HACK & CO.
Fellows Institute of Patent
Attorneys of Australia